

The fluid and sodium load administered each day following aortic aneurysm repair is likely to have an important influence on cardiorespiratory complications as well as on the return of bowel function. Given the lack of data regarding fluid management, Gouëffic et al's conclusion that early nasogastric tube removal reduces complications must be treated with considerable caution. Further data are needed before any conclusions are drawn with respect to the place of the nasogastric tube in aortic surgery.

Stewart R Walsh, MB BCh, MRCSEd
Tjun Tang, MB BChir
Michael E. Gaunt, MD, FRCS

Cambridge Vascular Research Unit
Addenbrooke's Hospital
Cambridge, United Kingdom

REFERENCES

1. Brandstrup B, Tonnesen H, Beier-Holgersen R, Hjortso E, Ording H, Lindorff-Larsen K, et al. Effects of intravenous fluid restriction on postoperative complications: comparison of two perioperative fluid regimens: a randomized assessor-blinded multicenter trial. *Ann Surg* 2003; 238:641-8.
2. Lobo DN, Bostock KA, Neal KR, Perkins AC, Rowlands BJ, Allison SP. Effect of salt and water balance on recovery of gastrointestinal function after elective colonic resection: a randomised controlled trial. *Lancet* 2002;359:1812-8.

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Reply

We have read with interest the commentaries from Drs Walsh and Tang. Although recent studies are consistent with our findings, we agree that the lack of statistical power is an important drawback of this study. Definitely, a well-designed, multicenter and adequately powered clinical study should be performed.

Drs Walsh and Tang noticed that the present study does not report data regarding fluid management, which is known to influence postoperative complications. However, this monocentric study is a randomized trial and consequently ensures balance between patient groups in postoperative fluid management. Of course, the design of a future large study should take account of the fluid management during the postoperative period to avoid this drawback.

Yann Gouëffic, MD

Department of Vascular Surgery
University Hospital of Nantes
Nantes, France

Bertrand Rozec, MD

Department of Anesthesiology
University Hospital of Nantes
Nantes, France

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Regarding "Improvement in the visualization of superficial arm veins being evaluated for access and bypass"

In their recent report, van Bemmelen et al (*J Vasc Surg* 2005;42:957-62) address the lack of standardized evaluation of upper-extremity superficial veins before dialysis access arteriovenous fistula (AVF) creation. The authors compared six different

methods to determine maximum venous diameter and conclude that forearm superficial veins distend maximally in a sitting position without the use of a tourniquet with the arm dangling down after the use of warm water immersion.

Although we agree with the authors on the importance of standardizing the preoperative vein mapping protocol, we believe that the study has several limitations that were not addressed in the article:

First, no data are given on the reproducibility of the six methods. A paper in press from our group reports on the reproducibility of superficial venous diameter measurement by comparing an inflatable cuff with a manually adjusted tourniquet. We found superficial forearm venous diameter to vary as much as 28% when using identical assessment protocols on different days.¹ In the absence of reproducibility data on each of the six congestion methods, it is difficult to assess the influence of each method on measured venous diameter.

Second, we believe that differences in arm length and distribution of venous valves may be important confounding factors when venous diameters are measured in the sitting position.² This is corroborated by the fact that subject position was found to have a significant effect on superficial venous diameter (Figs 3 to 5).

Third, we wonder whether "maximum" venous diameter is a clinically relevant end point. This is because the intravascular pressure needed to achieve "maximum" venous distension is not necessarily representative of postoperative intravenous pressure.³

Fourth, the authors do not share our concerns about the ellipsoid shape of the superficial venous cross-sectional area (CSA) after maximum venous distension. After AVF creation, postanastomotic intravenous pressures will decline to pressures that do not result in a circular CSA.³ This ellipsoid CSA shape will result in a higher resistance compared with a circular CSA shape with a comparable absolute cross-sectional area.⁴ In contrast to van Bemmelen et al, we therefore think that the CSA shape is indeed an important characteristic of superficial veins and should therefore also be included as part of the preoperative vein mapping protocol.

In summary, we agree with van Bemmelen et al on the need for a standardized protocol for preoperative superficial venous assessment. Ideally, a standardized protocol should enable accurate and reproducible venous assessment, ultimately facilitating a better understanding and prediction of AVF maturation and function. In addition, standardized protocols will enable better comparison between different studies. Further research is needed to determine which patient position and venous distension maneuvers enable the most reproducible superficial venous diameter assessment.

Nils R. Planken, MD

Departments of Vascular Surgery and Radiology
University Hospital Maastricht
Maastricht, The Netherlands

Tim Leiner, MD, PhD

Department of Radiology
University Hospital Maastricht
Maastricht, The Netherlands

Jan H.M. Tordoir, MD, PhD

Department of Vascular Surgery
University Hospital Maastricht
Maastricht, The Netherlands

REFERENCES

1. Planken RN, Keuter XHA, Hoeks APG, Kooman JP, van der Sande FM, Kessels AG, Leiner T, Tordoir JHM. Diameter measurements of the forearm cephalic vein prior to vascular access creation in end-stage renal disease patients: graduated pressure cuff versus tourniquet vessel dilata-